

REMARKS

Applicant would like to thank the Examiner for the careful consideration given the present application. The application has been carefully reviewed in light of the Office action, and amended as necessary to more clearly and particularly describe the subject matter which applicant regards as the invention.

Claims 5 has been amended to remove the Examiner's grounds for objection. Reconsideration and withdrawal of the objection to claim 5 is requested.

Claims 1-2 and 4-6 stand rejected as being anticipated by US 6,166,907 to Chien. For the following reasons, the Examiner's rejections are traversed.

The features of claim 2 have been introduced into claim 1. In the rejection of claim 2, the Examiner has considered that Fig. 5 of the Chien patent shows that the fan (62) has blades that are depicted as having edges sloping gradually away from the radiator as each of the blades extends outwardly from the rotating center. It is respectfully submitted that such structural features cannot be derived from the disclosure of Chien.

With reference to Figs. 12A-12D of the present application, the preferred impeller 52 is illustrated, and the structure of the impeller blades 59 is specifically shown. The structure of the impeller is described on pages 35-36 of the specification. With reference to Fig. 12D and page 36, lines 1-6, and it is specifically disclosed that "(e)dges 60 of the seven blades 59 facing the front of the heat dissipating portion 88 of the radiator 7 are sloping gradually away from the dissipating portion 88 as each of the edges extends in a radially outward direction from the rotating center of the impeller 52." It is submitted that this particular

structure is covered by amended claim 1.

There is no comparable disclosure in the Chien reference, and it is submitted that one skilled in the art would not interpret the Chien fan (i.e., fan 62 of Fig. 5) as teaching the impeller structure of amended claim 1. Specifically, Chien does not teach or suggest "an impeller having a plurality of blades, at least a part of the impeller being arranged inside the air channel body, said plurality of blades each have an edge facing the front of the heat dissipating portion, each of the edges sloping gradually away from the heat dissipating portion as each of the edges extends in a radially outward direction from a rotating center of the impeller", as required by amended claim 1. Based upon the sparse disclosure of Chien, there is simply no way to tell whether the Chien fan includes blades have "an edge facing the front of the heat dissipating portion" and whether such an edge, if it exists, is "sloping gradually away from the heat dissipating portion as each of the edges extends in a radially outward direction", as required. Accordingly, reconsideration and withdrawal of the rejection of claim 1 based upon the Chien patent is hereby requested.

Claim 4 has been amended to include the features of claim 5, and claim 5 has been cancelled. As amended, claim 4 includes the feature that the heat sink base plate is shaped so as to form a resistance increasing portion for increasing a resistance against the flow of coolant. More specifically, the resistance increasing portion is a raised portion that is formed by increasing a thickness of the base plate from each side of the base plate toward the center of the base plate. It is submitted that such structure is not taught by the cited Chien reference.

The Examiner has cited the corrugation 1231 of Fig. 2 of Chien as teaching

the claimed "resistance increasing portion" of amended claim 4. However, as described at Col. 3, lines 8-10, the corrugated portions 1231 are provided to forcibly produce water waves. It is submitted that the corrugated portions 1231 are not equivalent in structure or function to the resistance increasing portion defined in amended claim 4, and will not increase resistance to flow of the coolant. Rather, it is submitted that Chien only teaches, at best, that corrugations are provided to increase the surface area for heat dissipation so as to achieve a high heat dissipation performance.

In light of the foregoing, it is submitted that it is apparent that Chien does not teach or suggest a 'resistance increasing portion being a raised portion that is formed by increasing a thickness of the base plate from the one side and the other side of the heat dissipating surface toward a center of the heat dissipating surface', as required by amended claim 4. Accordingly, reconsideration and withdrawal of the rejection of amended claim 4 is hereby requested.

Claim 3 stands rejected as being unpatentable over Chien in view of US 6,749,012 to Gwin et al. The Examiner's rejections are traversed for the following reasons.

Initially, it is noted that claim 3 depends from claim 1, and that the Gwin patent does not remove or correct the deficiencies of Chien noted hereinbefore.

Further, it is noted that claim 3 defines the webs as being "situated outside the discharge port". The structure defined in claim 3 is clearly described at page 36, lines 8-13, and illustrated in Figs. 12A, 12B, and 12D. It is submitted that the webs illustrated in the Gwin patent are clearly disposed within the discharge port, rather than outside the discharge port, as required.

Accordingly, even if Chien and Gwin were combined as proposed by the Examiner, the invention defined in claim 3 would not result. Reconsideration and withdrawal of the rejection of claim 3 is hereby requested.

Claim 7 stands rejected as being unpatentable over Chien in view of US 6,578,626 to Calaman et al. The Examiner's rejections are traversed for the following reasons.

Initially, it is noted that Calaman does not correct or remove the deficiencies of the Chien reference as it relates to amended claim 4, described hereinbefore.

Further, with regard to claim 7, it is noted that this claim defines that the "positions of both end portions, with respect to the first direction, of the plurality of radiation fins are so determined that flow speeds of the coolant do not vary excessively greatly among flow passages each formed between two adjacent radiation fins as the coolant flows in at the coolant inlet and flows out of the coolant outlet through the flow passages", as required.

This feature of the claimed invention is illustrated in Fig. 2D (note varying end positions of radiation fins) and described at page 21, 12-20. It is applicant's position that Calaman does not teach any structure that is equivalent to the structure defined in claim 7. Notably, there is no mention in Calaman of positioning the end portions of the radiation fins so as to keep the flow speed of the coolant from varying excessively greatly among the flow passages. Therefore, reconsideration and withdrawal of the rejection of claim 7 based upon the combination of references is hereby requested.

In light of the foregoing, it is respectfully submitted that the present application is in a condition for allowance and notice to that effect is hereby requested. If it is

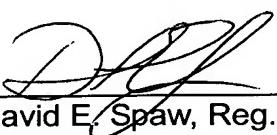
determined that the application is not in a condition for allowance, the Examiner is invited to initiate a telephone interview with the undersigned attorney to expedite prosecution of the present application.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 18-0160, our Order No. NIS-15441.

Respectfully submitted,

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